

Apple Launches Laser and Network

As most Apple users and enthusiasts will know Apple held their annual shareholders meeting on the 23rd of January. Last year this meeting was the launch pad of Macintosh and although everyone looked confident and assured, I'll bet there were more than just a few nails bitten to the quick in those first few weeks. Mac was a make or break product for Apple and it was as different to IBMs approach to personal computing as one could possibly imagine. This is all history now of course. The Macintosh, broke every record in the books to become the single most successful computer in history. This year it was with a true air of confidence that Steve Jobs and John Sculley mounted the podium at Palo Alto to announce their record sales and new products. 1985 is to be the year of consolidation they said, of getting the Mac into the offices and workshops of business everywhere. Hence their main products for this year are office products, the LaserWriter laser printer and AppleTalk, an inexpensive and simple to install network. I believe that these are products whose time has come. In the past networks have been expensive,

messy and oh so aggravating. Networks always needed an expert to install them and they always needed an in-house expert to maintain them. Now with the introduction of AppleTalk, Apple promises to change all this. All you will need are simple, inexpensive cable connections between computers, printers and hard disks; load up some software to make it all work and hey presto, look mum no hands! As for the LaserWriter - I've said it before, and I'll say it again - I predict that by the end of the decade there will be laserprinters in almost every office. Just as electronic typewriters created an office productivity revolution all those years ago, today the laser stands poised to do it all over again. Writing texts has already undergone great changes with the advent of wordprocessing, but the bottleneck is still in the printing of these texts. Present printers are invariably messy and noisy things (the faster they are the noisier) and if you want to print graphics you need another printer, but if you wanted letter quality printing and graphics mixed, oh well. While some low cost laser printers

already exist, except for their silent speed and limited graphics they are generally no more capable than average daisywheel printer. Apple's LaserWriter with its type-set quality sets a new standard (do I hear Yet Again! in the wings) providing for the first time, not only some 10 standard typefaces and a set of mathematical and greek letters for scientific writing, but also commercial typefaces such Times Roman and Helvetica from the distinguished house of Mergenthaler Linotype Company the leading international manufacturer of typesetting equipment. This represents the first time that a general office printer has met their standards and has been granted a license for these typefaces from Mergenthaler. Couple the above features with super quality graphics (90,000 dots per square inch) and enough memory to provide a full page of graphics at that density and the capability to hook these printers to IBM or IBM compatible PCs, then I think Apple have a product that holds the key to all those corporate doors that have remained closed up to now. Brefney Ruhl - Editor

Sculley's Speech

John Sculley, Apple's President and Chief Executive Officer, was keynote speaker at Apple's recent shareholders meeting. Sculley, a genius credited with turning Pepsi-Cola around to become what it is today, is expected to do the same for Apple. Earning over \$2,000,000 a year no-one doubts that he will do just that. Here's a synopsis of his address to the meeting.

Sculley summarized four key objectives Apple aimed for in 1984:

1. Establish Apple as a winner that people would want to buy from.
2. Achieve critical mass (\$1.5 Billion in fiscal '84) to become a major player.
3. Re-establish Apple's position as the Innovator in the industry. "we had to demonstrate that Apple could successfully introduce major products and do it on time"
4. Show that Apple could produce Great Marketing not just Great Product

Sculley then summarized the company's success in achieving those goals in 1984:

- the Apple IIe was introduced and has expanded the market.
- the Apple IIc was introduced and has expanded the market.
- the Lisa was changed to become a larger version of the Macintosh.
- Macintosh was introduced "and did for personal computing what talking pictures did for the motion picture industry."

Then internal Apple organization and 'event' marketing were discussed, eg the "1984" commercial and buying all the advertising in the election issue of Newsweek.

Sculley quoted Advertising Age magazine's latest Ad Welch survey, in which Apple has received the highest brand awareness of any personal computer manufacturer in the country. Almost 38% of the USA now think of Apple first when they think of personal computers. (IBM's figure is less than 14%). Sculley announced that 1984's 4th quarter sales were up +121% versus 1983, making Apple a \$2 billion company for the year as a whole. (it was only 15 months earlier that

they achieved \$1 billion a year, so the growth is phenomenal). He then outlined the companies strategic vision of the next several years:

Apple Strategy

- 1984 - Apple turnaround.
- 1985 - Implementation - focus on sales, distribution, service and support.
- 1986 - Major New Products Year.
- 1987 - Beginning of next Boom Years in the personal computer industry.

Business Market

- 1984 - Macintosh as the individual stand-alone station.
- 1985 - Mac functionality extended to the workgroup.
- 1986 - IBM, AT&T and others will have made major progress toward definition of departmental level mini-computer based office systems. For Apple: connect the workgroups established in 1985 to the departmental systems of 1986. Toward that end, establish strategic alliances eg. Apple & General Electric. Said Sculley, "I am pleased to announce today that General Electric will begin to offer the first product resulting from this alliance in the third quarter of 1985. It's called 'Dealer Talk' and it integrates Macintosh as an intelligent work station with GE's telecommunications services." (This system will be used to connect all Apple dealers to company headquarters - No mention was made of the recently reported Apple / Wang alliance)

1987 - Local Area Networks and PBX voice and data networks will be shipping in quantity. The telephone will become a connected part of the intelligent workstation.

"The result will be the implementation of fully computerized companies and Apple will be well positioned to be major player without having to chart a course that puts us on a collision path with IBM."

Education

- 1984 - Built installed base of Apple IIs in kindergarten through 12th grade and created a new market of Macs in colleges.
- 1985 - Begin to network Apple IIs toward the class room of the future - Apple "the major catalyst in helping reshape how students learn in school".
- 1986 - Apple to introduce new, interactive products to extend even further the use of computers from school in the home. "With optical disk storage technology becoming available, we believe home learning will truly become interactive by the end of 1986"
- 1987 - "There will be a sufficient critical mass of personal computers in the home, linked up by data bases and transactional services over the telephone lines. The home learning experience will be considerably enhanced by the phenomenon of students at home networking with one another."

"a large part of the learning experience may well take place outside the class room, and we expect Apple to be a leader in this phase of education, just as we are now in the schools"

Before closing, Sculley talked about innovation.

"It disturbs us that an industry that was founded on innovation, is starting to wonder whether the only way to survive is to be a vendor to the more vanilla version of large corporate giants."

"I think we can clearly see that we have changed the world of computing forever" Steve Jobs

"When I was a boy an apple was something you brought the teacher. Today, you learn on an Apple, or a Macintosh." Ronald Reagan (on film)

"Thanks Ron" Steve Jobs

"Dear Mr Jobs,
I was doing a crossword puzzle and a clue was 'as american as apple --'. I thought the answer was computer, but my mom said it was pie." letter from a 6.5 yr old child.

"1984 was a year of triumph for our company. It was a year when Apple reclaimed its role as the industry's innovator and raised the world's expectations of what a personal computer should be. It was the year Apple changed forever the groundrules for marketing in an

quotes from a shareholders meeting

entire industry. And it was the year when Apple established itself as the unquestioned challenger to IBM".

The LaserWriter:

1 million bytes of info per page
"once a person sees his own ideas looking that good on paper, they don't go back. . . .like going from 78rpm records to digital disk music."

"It disturbs us that an industry that was founded on innovation is starting to wonder whether the only way to survive is to be vendor to the more

vanilla version of large corporate giants."

John Sculley - Apple, President and Chief Executive Officer.

"Macintosh is the backbone of the Macintosh Office. 275,000 were sold in calendar year 1984, an installed base greater than any computer in history ever achieved in its first year of launch."

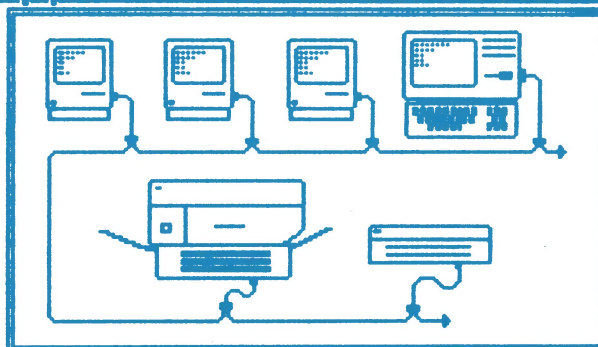
"AppleTalk. This is it! A white box! AppleTalk is a price value breakthrough, instead of the normal \$600 to \$1000 (around \$1200- \$2000 in Australia) per node in an IBM network, AppleTalk is only \$50." { \$75.00 in Aust}
Steve Jobs - Apple, Chairman of the Board

"At Microsoft, we see AppleTalk as a major breakthrough for networking. We are putting it into all of our current and future applications."
Bill Gates - Microsoft

Apple's Main New Products

The LaserWriter

The new LaserWriter produces near typeset quality text and graphics. It handles many paper sizes and overhead transparencies at up to eight pages per minute. It can handle very small type sizes needed for forms as well as large type needed for presentation work. The LaserWriter achieves full-page 300 dots per inch output thru a Canon LBP-CX10 laser engine, a powerful computer and software called PostScript. The LaserWriter contains the most powerful computer ever designed by Apple. Its heart is a 12Mhz Motorola 68000 microprocessor. The printers computer also contains 1/2 Megabyte of ROM plus 1.5 Megabyte of RAM. PostScript is a flexible page description language specifically designed by Adobe Systems Incorporated for high res



Up to 32 devices per AppleTalk Netw

olution printers and typesetters.

PostScript stores fonts as mathematical formulas, or "outlines". Using these outlines, PostScript can direct the printer to generate characters in a wide range of point sizes, from three points up to more than 720 points.

Besides text characters, PostScript also directs the production of extremely high quality line art and graphics.

AppleTalk

A single AppleTalk network connects up to 32 devices, with the computers and peripherals configured in any combination, in a work area of approximately 1000ft. AppleTalk can also serve as a tributary system, using bridges and gateways, developed by Apple and other vendors, either to link two or more AppleTalk networks or to

link to other networks.

Apple has published all protocols for AppleTalk. the architecture is layered. and it is "open" at every layer. Developers and users can gain access to the network as well as add their own protocols at any layer. Apple expects that developers will provide innovative products for AppleTa

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Product News

Edited by Brefney Ruhl

Australian Integrated Accounting Software

Sybiz

Sybiz, well known for their highly successful, ultra-integrated accounts system for the IBM PC, will release their software for the Macintosh in April. Rewritten in Pascal, the modules make extensive use of the pull-down menus and mouse. Bill of Materials will be released in May.

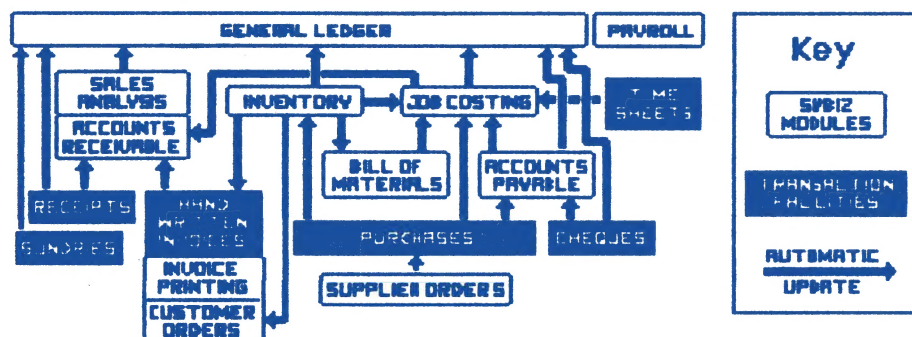
General Ledger.....\$695.00

The hub of SYBIZ is its general ledger module which receives postings from the other modules automatically.

Standard cash and journal

transactions are catered for with full balance checking and audit trails.

reconciled against the original order during entry into inventory. Finally suppliers' invoices can be reconciled against the goods received. Reports include outstanding orders by supplier and by product plus a list of non-invoiced items by supplier.



Accounts Payable.....\$695.00

Either open item or balance brought forward accounting methods are supported. Purchases may be allocated to inventory, to jobs or to gen.led. expense accounts.

Accounts Receivable.....\$695.00

Open item or balance brought forward may be selected, customer by customer, depending on the degree of control required. Invoices may be entered with simultaneous dissection to inventory, jobs or gen.led. income accounts with provision for prompt payment discounts.

Supplier Orders.....\$

purchase orders may be entered and printed. Arriving goods are

Inventory.....\$695.00

For each item, there is comprehensive data relating to prices, costs, sales, gross profit, turnover and reordering. Products may be brought in through the creditors module, manufactured via the bill of materials, sold through invoicing or transferred out to jobs. Stocktake entry and automatic price change facilities are also provided. Order Entry/Invoicing.....\$300.00

The module caters for the entry, amendment and cancellation of orders and back orders with simultaneous printing of pick list/delivery notes. It also generates invoices, credit notes and quotes for inventory items,

jobs and sundries such as freight. Reports include outstanding orders and back orders by customers and by product.

Job Costing.....\$695.00

For each job, SYBIZ stores contractual information, work in progress balances, cumulative costs and hours. Job costs are accumulated from the posting of time sheets, the transfer of goods from inventory and the entry of bought items through supplier invoices. Progress and final claims are processed through customer invoicing.

Payroll.....\$895.00

The tax scales and payroll items appropriate to the users's needs may be set up and modified by the user without the need of reprogramming. SYBIZ processes on an exception basis. Only variations from the previous period are entered. Weekly, fortnightly and monthly pays may be dissected to jobs or the gen.led. accounts.

Bill of Materials.....\$695.00

Parts explosions up to eight levels deep are handled. It links together the raw materials, sub-assemblies and finished products stored in the SYBIZ inventory module. Editing facilities include the blanket replacement of superseded parts while latest costs are automatically picked up through suppliers purchases.

Six "S"

Six "S", for years a supplier of accounts systems to thousands of companies around Australia, have now released their suit of programs for the Macintosh.

Creditors/General Ledger.....\$695.00

Greatly enhanced for the Macintosh this version allows for 699 GenLed accounts, 9 cost centre allocations and a variety of new reports and features. A typical configuration will

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cater for 500 creditors, 699 genled. accounts and 1400 transactions per month.

Debtors/Inventory.....\$750.00

A fully integrated system for debtors control, invoicing and stock control. The system can easily cater for 500 Debtors, 1000 products and 2000 transactions per month.

Payroll.....\$495.00

Configuration are available for 50, 100, 150, 200 and 250 employees. Debtors.....\$650.00

A stand alone debtors system for the preparation of Debtors Statements, Aged Trial Balance and Customer Sales Analysis. Caters for a typical configuration of 1000 debtors and 3000 transactions per months

Medical Billing.....\$695.00

Medical Practitioners can now have a patient billing system as well as all the great facilities that the Macintosh offers. A typical configuration will handle 1000 patients and 3000 transactions per month.

Professional Billing.....\$695.00

As for Medical Billing, this system is specially designed to cater for the needs of Accountants, Solicitors, Veterinary Surgeons, etc. This system will handle similar volumes to the Medical Billing system.

The above volumes are based on a 2-drive system.

MacFATS

MACFATS Storyboarder sounds very interesting too. Its designed to be a creative, planning, and budgeting tool for the film, advertising and television industries. Storyboarder allows users to dramatize ideas into a dynamic montage. Selected images can be aspect-ratio formatted, assembled sequentially, edited, time coded, and played back for review. Script notes can be viewed for dialogue and production details.

Available in Aus. Jan/Feb '85
US price \$395

Typing Tutors

We are often asked about typing tutors for the Mac, well here are two we stock. Typing Tutor II, circa Apple IIe and IBM PC, has been completely revamped for the Macintosh, and has re-emerged as Typing Tutor III. The other, Typing Intrigue, is a typing tutor-come-adventure for the easily bored. Available now from CPC.

Typing Tutor III\$49.95

Typing Intrigue.....\$69.95

MacPlot

MacDraw, due to be released in the US in November '84 (reviewed in our last Newsletter), is a 2-D CAD system for the Mac. Hard copy from MacDraw is via the Imagewriter, which prints a dot-matrix image to scale. But what MacDraw really needs for greater accuracy and professionalism is plotted output. MacPlot, by Contractural Ltd, is one program that fits the bill. This program produces colour-plotted output from MacDraw documents and effectively turns the Macintosh into a serious CAD/CAM system for architectural and engineering environments. The output can be scaled up or down and the pen speed is variable to allow plotting on film for overhead projector slides.

Plotters supported include Apple, Calcomp 81, Graphtec, MP1000-01 and HP7475.

Available from CPC, price \$279.00

MacFORTH

MacFORTH, a 32-bit FORTH system, is an interactive, stand-alone programming language and operating system for both Mac and MacXL Level 1 sports such features as user defined menus and windows, is compatible with Macintosh User Interface, contains interactive compiler and interpreter, has user access to the toolbox. Level 2 contains all Level 1 features plus assembler, IEEE Floating Point, Advanced Graphics, TE edit support and controls support. Level 2 is capable of producing advanced graphics.

Now available.

USA price Level 1\$ 197.00

Level 2\$ 315.00

Tekalike Communications

Tekalike is a communications program that gives the Macintosh or Lisa access, by modem or direct connection, to most existing graphic application programs running on large mainframes such as IBM, CDC, CRAY, DEC and others. Its also compatible with Issco Graphics' Tellagraf, Disspla, CueChart, and Tellaplan; Pricision Visuals' DI-3000 and Grafmaker; SAS/Graph; SPSS/Graf; Tektronix's Plot-10 and Easygraph; and many more. Tekalike emulates Tektronix 4010, 4012, 4014, and 4016 graphic terminals, and it supports color and pictures on local plotters by Apple, Hewlett-Packard and Houston Instruments. Tekalike supports local zooming on graphic data, and makes full use of the Mac's mouse for graphic input to a host application. Allows integration with MacPaint and MacWrite and other software. Available in USA. price \$250.00.

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Fat Mac Arrives.

by Gregor Whiley

The 512K Macintosh, known affectionately as the Fat Mac is now available. At a cost of \$4745.00 the Fat Mac is exceptional value for a half megabyte machine. But why, apart of course from the smug satisfaction of counting all those bytes, would you want one.

Firstly, some programs such as the much awaited Lotus Symphony, called Jazz on Macintosh, and Odesta Helix could not be written for 128K machines. We can expect to see this and many other complex programs soon after the 512K Macs become plentiful. Secondly, existing programs such as MacWrite will work much better in 512K. MacWrite has 80 odd pages of text storage and programs like MacDraw that store many program elements on disk will run much faster thru being able to store more of the program in memory.

Lastly, a 512K Mac will have the memory space to finally offer a high level program development system on the Macintosh itself. Currently most Mac programs are written on a Lisa and ported across to a Macintosh, or done in assembly language. Overall the extra memory removes what has been seen as a restriction on the development of the most complex applications and development programs.

Of course, Apple has in no way abandoned the 128K Mac owner. Upgrading is not only possible but will be available for no more than the difference in price between the two machines, \$1550.00. As an added bonus, upgrades will include your choice of either MacDraw or MacProject. Upgrades are available now in limited quantities, so anyone wanting one should call one of our

(makes)

DOLLARS & SENSE

by Tony Archer,
CPC Financial Director

As an accountant type I have seen many small business or home accounting or cash book programmes. Most of which have done a less than adequate job of keeping financial records. Some well known packages even used single entry (ugh!). All those programmes have one major draw back, namely, it could be done just as fast using a manual cash book. Those systems also gave the bare minimum of information; rarely more than your present bank balance.

We have just received a demo version of "Dollars and Sense" for the Mac. The Apple IIe and IBM PC versions have been well praised by computer journalists in the States. Being a sceptic, and not having been able to try those versions, I expected D&S might just be a little better than "The Home Accountant". In fact it is just great.

All those laymen fears of double entry book keeping can be cast aside. D&S has no fears for the folk without any book keeping experience. But above all it gives so much useful information.

Each time you start the programme you are advised of your net worth and annual budgeted income. The reports are simple, clear, informative and can be displayed on the screen or printed. You can also have the results displayed or printed in graphic form.

Above all it is the ease of setting up chart of accounts and your budgets and the ease of data entry from your cheque book, deposit book and credit card dockets.

Mac 512K



Macintosh XL

...And The Lisa Has A Name Change.

Apple has announced that the Lisa 2/10 has been renamed the Macintosh XL to reflect its key role in the Macintosh Office, Apple's new line of business products. Said Apple's Macintosh Product Manager, Peter Sandys, "Many people have asked when Apple will introduce a Macintosh that has a built-in hard disk and more capacity. We already have such a Macintosh. It's called the Lisa 2/10 and we want people to know what it can do. That's why we are changing its name to Macintosh XL - to better communicate that the XL is truly an extra-Large Macintosh." It seems the Lisa 2 and 2/5 will be phased out, but all existing owners can easily upgrade to Macintosh XL.

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The Real Lisa

By Andy McYeigh - CPC consultant, programmer of accounts systems and Unix nut.

If you have ever seen a Lisa being demonstrated, then you would have been fascinated by the total departure from any known concept of how computers work. The Lisa it appeared, did not work like an ordinary computer, but more like an ordinary human. Any instructions you had to give the computer could be done by pointing to a picture that represented the job at hand. Presto, your program would begin working. When comparing the Lisas' operation to that of other Personal Computers, the one question that is raised is 'How does it do it?', and why can't other computer do the same?'

The answer to these questions is technology.

Firstly the Lisa uses the latest technology in chips, the Motorola 68000 16 bit, 32 bit addressable chip that can talk to the 1 million bytes (characters) of information in Lisa's memory. It has enough power and capacity to support multi-tasking processes and have a fully bit-mapped screen which produces the excellent quality

graphics of the Lisa. Secondly the Lisa is the base for new software technology, improved languages that fully utilize the available memory and processing capacity of the M68000 chip. Thirdly the Lisa has created a new buzz phrase in computing "User Friendliness", and has set a standard in this area that all others are judged by. In answering those questions, I have just touched on the real Lisa, the real reason why the Lisa is such a powerful machine.

The Lisa Office System and 7/7 software do not fully utilize the power of the Lisa. The real power of the Lisa lies in its ability to operate under the Unix operating system.

Working under Unix the lisa becomes the centre of a local area network (LAN) with the ability to support 7 terminals in a full multi-user multi-tasking mode. In addition the Lisa has one foreground and two background operating modes. This enables up to 9 tasks to be performed concurrently.

The Unix system has a well supported software base also, thus we can expect to see some excellent multi-user applications on the market for the Lisa before too long.

Over the next few months we will be researching the software market and presenting the results in this journal. By teaming the most

More?

Now that hard disks, 512K Random Access Memory (RAM) and other peripherals are available for the Macintosh, one might ask where to now. Well, some very interesting speculation is going on in the US. Evidently there's a little-noticed paragraph buried in one of the Mac press releases. The release, in a discussion of new automated circuit board assembly techniques, mentions that the Macintosh assembly lines allow for components to be mounted on both sides of the circuit board "thereby increasing package density and making it possible to add more components".

This revelation opens a whole new door. The 'possibilities' for adding megabytes of RAM, or adding a co-processor such as a math chip now gain the status of 'probabilities'. Beyond that the Motorola 68010 chip could be a possible upgrade - the

by Brafney Rühl

68010 is compatible with the 68000 but also supports virtual disk storage as if it were RAM.

The 68020, due for release internationally late 1984, now also becomes a possible contender. If you thought the 68000 (with its 16-bit data path and 24-bit word length, able to directly address a maximum of 16 megabytes of RAM) was big, it is. But! The new Motorola 68020 has a full 32-bit data path and 32-bit internal addressing capability and is able to address up to 4 gigabytes (4 billion bytes) of RAM.

The above is of course pure speculation and Apple isn't saying anything, but with increasing pressure from the 'Big Blue', I don't think Apple will sit on their laurels, and besides its nice to know that even though my Mac hasn't any expansion slots the capability to upgrade is not diminished.



advanced machine with powerful software and support we can look to providing solutions to a new area of the marketplace, and a most exciting solution it will be too.

Next month I will delve deeper into the technical aspects of the Unix system, so keep reading. If you have any questions on Unix or comments about Unix then we would appreciate hearing from you.

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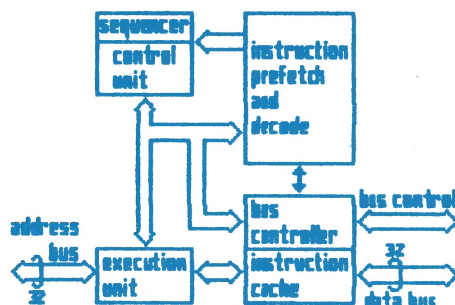
Care and Feeding of Your Macintosh

Technical Tips And Information



MC68020

The MC68020, the newest addition to the Motorola M68000 family of micro-processors, is a full 32-bit processor with separate 32-bit data and address buses, an on-board instruction cache, dynamic bus sizing, and a coprocessor interface. It is object-code compatible with the earlier members of the M68000 family but has new addressing modes in support of highlevel languages.

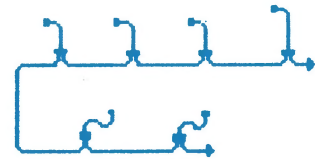


MC68020 block diagram

The MC68020 is an HCMOS (high-speed complementary metal oxide semiconductor) micro-processor with some 200,000 individual transistors on a 375 by 350 millimeter die, operating at 16.67 MHz clock frequency (60-nanosecond clock period) and dissipating less than 1.5 watts of power. It can process instructions at a sustained rate of 2 to 3 million instructions per second (MIPS) and at burst rates exceeding 8 MIPS.

AppleTalk Specifications.

Topology.....	BUS
Architecture.....	Open
Max. no. Connections.....	32
Medium.....	Shielded Twisted Pair
Connection.....	Passive Drops
Operating Distance.....	305m
Speed.....	230.4 kilobits per second
Link Access Control.....	Carrier-sense multiple access with collision avoidance (CSMA/CA)
Frame Format.....	SDLC (Synchronous Data Link Control)
Configuration.....	Self-configuring, no user switches or action to identify devices
Environment.....	Operating temperature: 0 C to 40 C
Storage Temperature.....	-40 C to 70 C
Relative Humidity.....	5% to 95%



LaserWriter Specifications

Marking Engine.....	Canon LBP-CX laser-xerographic engine.
Controller.....	Controller hardware contains :-12Mhz Motorola 68000, 1/2 Meg of ROM, 1.5 Meg of RAM, AppleTalk and RS-232C interfaces.
Print Quality.....	All text and graphics printed at 300 dots per inch.
Built-in Fonts.....	Courier, Times & Helvetica in Bold, Oblique and Bold Oblique; and Symbol are built-in. Underline, Shadow and Hollow styles are supported. All Mac fonts.
Built-In Font Sizes.....	4pt to 720 pt. Limited only by paper size
Speed.....	8 pages per minute maximum throughput.
Interface.....	AppleTalk and RS232C.
Print Protocols Supported.....	PostScript and a subset of Diablo 630
Recommended Duty Cycle.....	Less than 4000 pages per month
Printing Material Feed.....	Auto input cassette. Manual Single Sheet Feed.
Printing Materials.....	Can use most letterhead and colored stock from 8-34 lb. Can also use standard transparency material. Envelopes and labels supported.
Printing Material Sizes and capacity.....	Supports Letter, Legal, A4 and B5 sizes. Input cassette holds 100 sheets. Output tray holds 20sh.
Maximum Printable Surface	Dimension Letter, Legal, A4, B5. Width 8.07.07.57.0 (inches). Length 10.912.510.510.0 (inches)

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